**1.1 Markets, Demand and Supply**

*The Law of Demand*

**Introduction:** The demand for a particular good or resource depends on several factors. This activity will introduce the various determinants of demand and give you the opportunity to practice how to analyze and illustrate the effect of different factors on the demand for two goods, oil and beef. The activity should be completed and turned in to Mr. Welker by the end of class.

**Changes in the Price:**Assuming *nothing else changes* (in Economic we use the phrase *ceteris paribus,* which means “all else equal”), a change in the price of a good or resource will cause the *quantity demanded* to change in the opposite direction.

* An increase in price causes the quantity demanded to decrease
* A decrease in price causes the quantity demanded to increase
* On a graph, this can be seen as a *movement along* an existing demand curve.
* Explanations for the inverse relationship between Price and Quantity demanded:
  + The Income Effect: As prices fall, the *real incomes* of consumers increase, so they tend to buy more of most goods
  + The Substitution Effect: As prices fall, the *real prices* of substitute goods appear to increase, so consumers buy more of the good for which price has decreased.
  + The Law of Diminishing Marginal Utility: Because consumers get less *utility (happiness)* from each additional unit of a good they consume, they will only buy more of the good if its price decreases.

**Changes in a non-price determinant of demand:**If certain factors other than the price of a good change, it is possible that an entire demand curve can shift inwards (a decrease in demand) or outwards (an increase in demand)

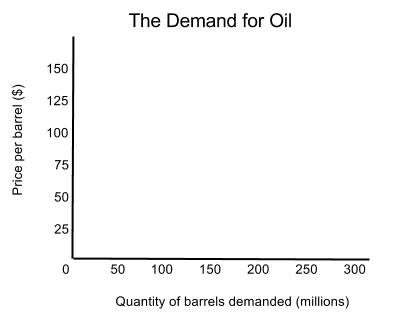
* **T:** The tastes of consumers: As consumers’ preferences shift between different types of goods, the demand curves of those goods can shift inwards or outwards.
* **O:** Other related goods’ prices:
  + If the price of a *substitute good* (one that can be used *instead of the good in question*) change, then the demand for the good in question will change in the same direction. (Example, when beef prices rise, demand for pork increases).
  + If the price of a *complementary good* (one that is consumed together with the good in question) changes, then the demand for the good in question will change in the opposite direction. (Example: when the price of hot dogs increases, demand for hot dog buns will decrease).
* **E:** Expectations of future prices: If consumers expect the price of a good to increase, demand for that good will increase now, since they’ll want to buy it while it is still relatively cheap. If prices are expected to fall, consumers will demand less now and wait until the price drops in the future.
* **I:** Incomes of consumers: For most goods, as the consumers’ incomes rise, demand increases and as incomes fall, demand decreases. Such goods are called “normal goods”. If consumers demand more of a good when their incomes fall, and less when incomes rise, then the good is called an “inferior good”.
* **S:** Size of the market: If the number of consumers increases, demand for a good will increase. If the number of consumers decreases, demand for a good will decrease.

When there is a *change in demand*, a demand curve will shift to the left (decrease in demand) or two the right (increase in demand).

**Practice activity:** The table below shows the global demand for oil, in millions of barrels per day, across a range of prices.

|  |  |
| --- | --- |
| **Price ($ per barrel)** | **Quantity demanded (millions of barrels per day)** |
| 25 | 300 |
| 50 | 250 |
| 75 | 200 |
| 100 | 150 |
| 125 | 100 |
| 150 | 50 |

Plot the demand for oil on the graph below.



1. The data for the demand for oil indicates that at a price of $50, buyers would be willing to buy \_\_\_\_\_\_\_\_\_\_ million barrels of oil per day. All else equal, if the price of oil increased to $100, buyers would be willing to buy \_\_\_\_\_\_\_\_ million barrels of oil. Such a change represents a decrease in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Other things constant, if the price of oil decreased to $25, buyers would be willing to buy \_\_\_\_\_\_\_\_\_\_ million barrels. Such a change would be called an increase in \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Now, assume that due to rising incomes in China, Chinese consumers are buying more cars. This represents a change in the *ceteris paribus (all else equal)* conditions under which the original demand was determined. Assume that due to higher Chinese incomes, the demand for oil increases by 20 million barrels at every price. Fill in the demand table below to show the effect of rising Chinese incomes on the global demand for oil.

|  |  |
| --- | --- |
| **Price ($ per barrel)** | **Quantity demanded (millions of barrels per day)** |
| 25 | \_\_\_\_\_\_ |
| 50 | \_\_\_\_\_\_ |
| 75 | \_\_\_\_\_\_ |
| 100 | \_\_\_\_\_\_ |
| 125 | \_\_\_\_\_\_ |
| 150 | \_\_\_\_\_\_ |

1. On the demand curve diagram you drew for #1, draw a new demand curve showing the effect of rising Chinese incomes. Label the new demand curve D1 and answer the questions that follow.
   1. Comparing the new demand curve with the original demand curve, we can say that rising incomes in China have caused demand to shift to the \_\_\_\_\_\_\_\_\_\_\_\_\_.
   2. Such a shift in demand indicates that at each of the possible prices shown, buyers are now willing to buy a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ quantity of oil than before. The cause of this change was an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the incomes of consumers.
2. Changes in incomes are not the only factor that can shift the demand for a product. Assume that due to greater awareness of environmental issues and climate change, energy consumers and automobile drivers have begun to shift their tastes and preferences to renewable energies, reducing demand for oil by 20 million barrels at each of the prices from the original demand table. Fill in the demand table below to show the effect of changing consumer tastes and preferences on the global demand for oil.

|  |  |
| --- | --- |
| **Price ($ per barrel)** | **Quantity demanded (millions of barrels per day)** |
| 25 | \_\_\_\_\_\_ |
| 50 | \_\_\_\_\_\_ |
| 75 | \_\_\_\_\_\_ |
| 100 | \_\_\_\_\_\_ |
| 125 | \_\_\_\_\_\_ |
| 150 | \_\_\_\_\_\_ |

1. On the demand curve diagram you drew for #1, draw a new demand curve showing the effect of greater environmental awareness among consumers. Label the new demand curve D2 and answer the questions that follow.
   1. Comparing the new demand curve with the original demand curve, we can say that greater environmental awareness has caused demand to shift to the \_\_\_\_\_\_\_\_\_\_\_\_\_.
   2. Such a shift in demand indicates that at each of the possible prices shown, buyers are now willing to buy a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ quantity of oil than before. The cause of this change was \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Changes in consumers’ incomes and tastes and preferences are only two of the factors that can affect the demand for a good. Below, brainstorm and clearly explain other possible factors that could cause demand for oil to *increase* and *decrease.*
   1. A change in the price of substitute goods:
      1. Would cause demand for oil to increase:

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|  |

* + 1. Would cause demand for oil to decrease:

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|  |

* 1. A change in the price of a complementary good:
     1. Would cause the demand for oil to increase:

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| --- |
|  |

* + 1. Would cause the demand for oil to decrease:

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|  |

* 1. A change in consumers expectations of future oil prices:
     1. Would cause the demand for oil to increase:

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| --- |
|  |

* + 1. Would cause the demand for oil to decrease:

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| --- |
|  |

* 1. A change in the size of the market (the number of consumers):
     1. Would cause the demand for oil to increase:

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|  |

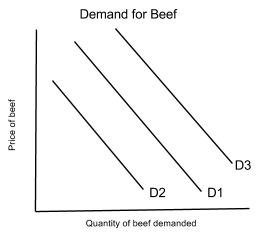
* + 1. Would cause the demand for oil to decrease:

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|  |

1. You hear a fellow student say: “Markets are like a perpetual see-saw. If demand rises, the price rises; if price rises, then demand will fall. If demand falls, price will fall; if price falls, demand will rise and so on forever.” In the space below, correct your friend’s obvious confusion in no more than one short paragraph.

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|  |

1. The graph below shows three possible levels of demand for beef. Assume that at present beef demand is represented by the curve labeled D1. Read the eight newspaper headlines in the table below the graph and use the table to indicate the impact each headline will have on the demand for beef.



|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Headline | Will demand shift (Y/N) | Will demand increase or decrease (I/D) | Will the curve shift to the left or the right (L/R) | Which is the new demand curve (D3/D2) | Which determinant of demand is affected? (T/O/E/I/S) |
| *Price of beef expected to increase next month* |  |  |  |  |  |
| *Recession causes average incomes to fall* |  |  |  |  |  |
| *Pork prices increase* |  |  |  |  |  |
| *New study claims red meat increases risk of heart disease* |  |  |  |  |  |
| *Higher feed costs cause price of beef to rise* |  |  |  |  |  |
| *Propane shortage makes barbecuing a more expensive way to cook* |  |  |  |  |  |
| *Nationwide fad: the “all protein diet”* |  |  |  |  |  |
| *Immigration causes population to rise for third straight year* |  |  |  |  |  |